

# Colorado Fish and Wildlife Conservation Office



Lakewood: Pam Sponholtz, Project Leader

US Air Force Academy, Colorado Springs: Brian Mihlbachler, Biological Scientist, Diane Strohm, Biological Scientist, Greg Speights, Biological Technician, Steve Wallace, Forestry Technician

Buckley Air Force Base, Aurora: Krystal Phillips, Fish and Wildlife Biologist, Laura Scieszka, Biotech

US Army Pueblo Chemical Depot, Pueblo: Max Canestorp, Natural and Cultural Resources Manager

Rocky Mountain National Park, Estes Park: Chris Kennedy, Fish Biologist

## May 2013 Accomplishment Report

### Leadership in Science and Technology

*Prescribed burn to enhance rare plant species:* Steve Wallace and Diane Strohm planned and successfully implemented the U.S. Air Force Academy's (Academy) first broadcast burn in a decade! The objective was to enhance the rare plains ironweed (*Vernonia marginata*) forb by targeting invasive smooth brome grass. This patch of ironweed is one of only two known populations in Colorado. The burn provided hands-on training in prescribed fire to the Academy Fire Department. It involved close coordination with the USFWS Region Six fire staff, including USFWS Prescribed Fire Burn Boss Rich Sterry, who was onsite for the May 14 burn.



Brian Mihlbachler works with Academy firefighters to maximize brome consumption in direct proximity to ironweed plants



Burn Boss Steve Wallace monitors fuel consumption

### Partnerships and Accountability

*Fuel hazard mitigation:* Diane Strohm led a project to reduce fuels in proximity to residences along the southeastern boundary of the Academy. Brush buildup and dense flashy fuels along this boundary present a serious hazard to landowners. This "good neighbor" project is a partnership between the Academy and the Colorado Springs Fire Department, which plans to donate their crew for a day to chip brush and prune lower pine limbs.

*Air Academy High School (AAHS) seedling release:* Diane Strohm coordinated with the science teacher at AAHS to have students cut Gambel oak to release naturally-established tree seedlings near the Academy's west boundary. The project afforded the opportunity to teach students about forest management and natural succession.



AAHS student clears oak from around a young seedling

*Permitting:* Pam Sponholtz and Chris Kennedy completed a research proposal and “minimum tools analysis” for the National Park Service. Once approved, these documents will allow the Service to conduct fisheries surveys on Rocky Mountain National Park.

*Phase II Stormwater Taskforce meeting:* Brian Mihlbachler attended a Phase II Stormwater Taskforce meeting with El Paso County and the City of Colorado Springs to discuss regional stormwater management and infrastructure needs. He is also serving on an Engineering subteam to develop ranking criteria for prioritizing an estimated \$900M in regional stormwater infrastructure projects. The Taskforce is currently discussing regional governance options that could be adopted to collect and assess fees or taxes and help prioritize projects.

*Wetland survey assessment:* Krystal Phillips and Pam Sponholtz worked with a local consultant to develop a scope of work to complete wetland delineation on BAFB.

*Monthly Bird Airstrike Hazards (BASH) meeting:* Krystal Phillips reviewed and provided comments on the BAFB BASH plan and documented pelican use at Williams Lake.

*Installation Support Team (IST):* Krystal Phillips provided project updates and justifications, funding status, preferred execution methods, and responded to general questions from the Air Force’s Installation Support Team.

*BAFB Arbor and Earth Day:* Krystal Phillips assisted with Earth Day display and hand-outs on April 23, 2013. The Arbor Day events that were accomplished on April 24 2013 were: coordinated set-up, transported guest speaker, and answered leadership questions. Krystal was interviewed for the below article that was

published May 2, 2013 in the Buckley Guardian printed newspaper.



*Natural resources contracts on BAFB:*

- Invasive Spp. (\$30K): Waiting funding for FY13; have confirmed the project will be funded in FY13. Next steps: contract solicitation, technical review of proposals, and contract award.
- Wildlife Barrier (\$165K): Waiting installation commander signature, and portion of funding (\$65K) to be released. Next steps: technical review of contract proposal and contract award.

*Baseline avian survey:* Laura Scieszka traveled to the field before the crack of dawn with Rob Schorr of the Colorado Natural Heritage Program (CNHP) at Colorado State, to collect data for the baseline avian survey. Exciting bird finds included lark buntings, loggerheaded shrikes, a western tanager, baltimore orioles, cliff swallows, yellow warblers, and a

mockingbird. Laura survived a heart palpitation when she came within a foot of a rattlesnake.

*Evaluation of construction sites on BAFB:* Laura Scieszka went out to recent construction sites with storm water engineer Elizabeth Rahman to evaluate the re-growth of vegetation and evaluate invasive species presence on BAFB.

### **Species Conservation and Management**

*Preble's meadow jumping mouse study:* Brian Mihlbachler coordinated with Rob Schorr (CNHP) to prioritize the Preble's meadow jumping mouse trapping and telemetry field studies for 2013 on the Academy. Population estimates, demographics, and habitat use will be assessed on Monument Creek and in the northeast corner of the installation along Black Forest Creek and an adjacent wetland complex.

*Surveying for amphibians:* Greg Speights and Brian Mihlbachler have started surveying for amphibians, especially northern leopard frogs, to be sampled for chytrid fungus.

*Migratory Birds:* Krystal Phillips submitted Migratory Bird Treaty Act and the Bald and Gold Eagle Protection Act protocols to BAFB Water Quality Manager for future planning of a new sewer line in order to mitigate the potential for nesting raptors near the proposed site.

*Burrowing owl surveys:* Krystal Phillips and Max Canestorp conducted burrowing owl surveys and only one nesting pair has been identified in Wildlife Management Area #7 on BAFB. Metal burrowing owl signs were placed to deter nest disturbance.

*Rocky Mountain National Park (RMNP) Fisheries and Aquatic Management Report:* Chris Kennedy worked on updating the 2001 RMNP Fisheries and Aquatic Management Report. This report

encompasses almost all fisheries and aquatic work conducted in the park. Chris completed drafts of 13 cutthroat trout population sections and a history / management section.

*Invertebrate sampling project:* Chris Kennedy worked on an invertebrate sampling project: conducted literature searches, developed a sampling protocol, and had meetings with USGS researchers on collaboration on a larger project.

*Climate change:* Chris Kennedy and Pam Sponholtz consulted and reviewed climate change projects by U.S. Geological Survey (USGS) researchers Andrew Todd and James Roberts. This proposal will be submitted for funding under the joint USFWS/USGS "Support for Science" Program.

*Lily Lake:* Chris Kennedy removed an oxygen system from Lily Lake at Rocky Mountain National Park.



Removing oxygen system from Lily Lake, RMNP

*Raptor nest surveys:* Max Canestorp conducted raptor nest surveys on Pueblo Chemical Depot (PCD). Four active great horned owl nests, two active redtail hawk nests, and one active Swainson's hawk nest were documented.

### **Habitat Conservation and Management**

*Roadside tree removal:* Steve Wallace completed a final sweep of dead and dying roadside trees before Academy Graduation. Numerous trees have been fading due to drought, magnesium chloride de-icer, and bark beetles.

*Seedling sowing request:* Diane Strohm assessed potential reforestation needs for 2015-2016, and submitted a seedling sowing request to the U.S. Forest Service (USFS) Bessey Nursery to grow trees for future planting. The Academy has an MOA with the USFS to store seed and grow seedlings as needed. These ponderosa pine and Douglas fir seedlings will be cultivated from seed collected from various elevations on the Academy to maximize adaptability to planting sites.

*Forest health surveys:* Steve Wallace, Diane Strohm, and a local contractor are stepping up field inventory for bark beetle activity. The Academy is experiencing substantial tree mortality from these insects due to extreme drought conditions, which weakens and predisposes trees to insects and disease. Numerous trees that were attacked in the early spring flight of Ips and twig beetles are starting to turn red. Prompt removal and chipping or peeling are necessary to preclude infestation of adjacent trees. Numerous annual generations of Ips and twig beetles greatly complicate effective suppression. Approximately 80 newly infested trees have already been removed this spring.

*Fuel hazard mitigation:* Steve Wallace and Diane Strohm worked with a contractor to clear brush and heavy fuels from several high priority areas in Jacks Valley on the Academy. Fuels were cleared and lower tree limbs pruned in close proximity to wood structures in the Basic Cadet Training Area, and around the Ammunition Storage Facility in Jacks Valley. Fuel mitigation continues to be a top priority due to continued high fire danger. Fuel and soil moistures are drier than the explosive 2002 season, in which the Hayman Fire burned 137,000 acres.

*Farish aspen regeneration elk fencing:* Steve Wallace assessed fence conditions around a

series of small harvest units at Farish, and coordinated with a contractor to repair sections that had been breached by hungry elk. These units were created to establish healthy young stands of aspen through resprouting. A short-lived pioneer species, aspen has been declining across the landscape. It requires full sunlight to regenerate. Barring natural disturbance such as fires, widespread blowdowns or insect epidemics, aspen will be replaced by later successional species such as spruce. Intense herbivory by elk and deer necessitate fencing to ensure successful regeneration. Fencing will be removed in several years.

*Meeting with CDOT engineers and hydrologists:* Brian Mihlbachler met with CDOT engineers and hydrologists to finalize the erosion control and habitat restoration plan for upper Middle Tributary they will be constructing as part of the I-25 widening mitigation requirement.

*Post-fire restoration:*

Brian Mihlbachler worked with the USAFA Heavy Equipment Shop to recover soil dozed along a 6000' fireline created during the Waldo Canyon Fire; and Greg, Max, and Brian harrowed and broadcast seeded the site with native grasses.



Recovering topsoil from the edges of a fireline for native grass re-seeding

*Noxious weed spraying:* Brian Mihlbachler met with Open Range Weed Control to discuss noxious weed spraying priorities for the spring and fall herbicide treatments. Small and isolated populations of weeds such as myrtle

spurge, white top, houndstongue, St. Johnswort, and Russian knapweed that may reasonably be targeted for eradication are the highest spring priority.



A houndstongue rosette ready for a spring noxious weed herbicide application

*Dyer's woad noxious weed site:* Brian Mhlbachler visited a Dyer's woad (*Isatis tinctoria*) noxious weed site two miles north of the Academy to develop a field search image for this species. The northern El Paso County site is the only known population in Colorado, and is only being marginally controlled on the private land.



Dyer's woad flowering in northern El Paso County near the Academy

*Texas Agri-Life Biocontrols on BAFB:* Krystal Phillips and Pam Sponholtz met with TX Agri-Life staff, Jerry Michaels and Erin Parks, to discuss the future of biocontrols on BAFB, overlapping projects, and the possibility of expanding cooperative efforts to Rocky Mountain Arsenal (RMA).

*Myrtle spurge control:* Max Canestorp assisted Greg Speights with myrtle spurge control efforts on the Academy.

*Texas AgriLife:* Laura Scieszka shadowed experts on biological control of noxious weeds and assisted with the upkeep of pitfall traps.

*National Eagle Repository:* Laura Scieszka toured the repository located in the Rocky Mountain Arsenal National Wildlife Refuge, including the confiscated wildlife trade warehouse and the Eagle feather lab. Laura returned for two additional visits (one conveniently on National Endangered Species Day!) to assist in filling Native American feather orders via plucking of Golden and Bald eagles.



About to pluck adult bald eagle wings



Immature golden eagle feathers - the most requested from the tribes

*Stream monitoring for native species:* Laura Scieszka and Pam Sponholtz participated in a site visit to Tabeguache Creek to evaluate a potential restoration project for flannelmouth suckers, bluehead suckers and roundtail chub.

### **Consultation with Native Americans**

*Culturally modified trees:* Max Canestorp and Diane Strohm surveyed numerous archaeological sites to identify culturally modified trees, in preparation for a series of tribal consultations throughout the summer to be held on the Academy. Native Americans

occasionally tied trees close to the ground to produce a sharp bend which could indicate a trail direction or sacred site. They also peeled trees for nutrition derived from the cambium layer.

### **Public Use and Recreation**

*Re-opening trails:* Greg Speights assisted the USFS with signing and re-opening the trail access between the Pike National Forest and the Academy.

*Stocking rainbow trout:* Greg Speights and Max Canestorp stocked 1450 pounds of 9-11" rainbow trout into the Academy lakes.



Max Canestorp stocking rainbow trout at the Kettle Lakes, USAFA

*Inspection of recreational trails:* Greg Speights and Max Canestorp performed an inspection of the recreational trails on the Academy and at Farish Recreation Area to identify needed maintenance and repairs. Fallen trees and brush blocking the trails was removed.



Greg Speights (in proper PPE!) removing a fallen tree from a hiking and biking trail

*Leo Lake Project:* Brian Muhlbachler provided a dredging plan and revegetation guidance for the Leo Lake dam reconstruction project at Farish Recreation Area. Approximately 2000 cubic feet of sediment will be removed to provide deep, over-wintering areas for trout that are historically susceptible to winter kill from low oxygen levels. Dredging will also reduce the growth of submerged aquatic weeds that impair fishing.



Sediment to be removed from Leo Lake to improve wintering rainbow trout survival